

509 of the same period in 1954.²⁶

489 A. Transportation of Key Commodities and
438 Their Trade Routes

Before the war, East China depended upon the import of rice and flour in order to meet the consumption requirements of the larger cities in the region. In 1954, the Communists claimed that East China had become a grain-surplus region, but this is true only because grain from Central-South China is shipped by the Chekiang-Kiangsi Railway and by barges on the Yangtze River to Shanghai and other important centers in East China. Wheat from Shantung is usually shipped to Shanghai, Tientsin, or Chengchow for milling and distribution. Rice produced in Kiangsu is shipped to North and Northwest China because in recent years these have been grain-deficit regions.

B. Cotton Transportaton and Trade Routes

Generally speaking, East China is a cotton-deficit region. Shanghai and Tsingtao, the two leading textile manufacturing centers of China, need tremendous quantities of raw cotton each year. The general pattern of cotton movements in East China is shown in the following table.

26. NCNA, Peking, July 20, 1955.

Transportation of Raw Cotton in
East China*

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1Stanford U. S-4, 5 1956 AF15 East China AF15

Origin	Transportation	Destination
Shensi, Northwest China	Rail	Shantung, East China
Hopei, North China	Rail	Shantung, East China
Shansi, North China	Rail	Kiangsu, East China
Shantung, East China	Rail	Hopei, North China
		Kiangsu, East China
Honan, Central-South China	Rail	Honan, Central-South China
Shantung, East China	Coastal Shipping	Kiangsu and Shantung, East China
Hupei, Central-South China	Inland Waterway	Honan, Central-South China
		Kiangsu, East China
Hopei, North China	Coastal Shipping	Kiangsu and Shantung, East China
Shantung, East China	Coastal Shipping	Hopei, North China

* Hsin-hua Yüeh-pao [New China Monthly], Nov. 1950, Vol. III, No. 1, p. 139.
Wen-hui-Pao [Wen-hui Daily], Hong Kong, Sept., 4, Sept. 29, 1953.

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438 Shantung is the only cotton-surplus province in East China and its output of raw cotton is consumed locally. Only a portion of the surplus is shipped to other provinces in East China or North China. The major amount of raw cotton required by Shanghai and Tsingtao mills is supplied by surplus production in the provinces of North, Central-South, and Northwest China.

C. Coal Transportation and Trade Routes

East China is one of three areas in China consistently short of coal. Within this region, only Shantung and Anhwei report a surplus in coal production. Other provinces of this region have to depend upon the supply from the principal mines of other regions. Manchuria coal is imported for Chekiang, Fukien, Kiangsu, and Anhwei. Coal from Hopei, Shantung, Shansi, and Honan is also shipped to the areas receiving coal from Manchuria. Coal from Manchuria and North China is carried by rail. The principal rail lines involved in this north-south traffic are Peking-Hankow, Hankow-Canton, Tientsin--P'u-k'ou, (Pukow), Tsinan-Tsingtao, and Shihchiachuang-Taiyuan railways. Some coal is shipped by boat to East China coastal cities from Manchuria and North China

489 ports.²⁷ But the coal transported by coastal
438 steamers amounts to only 11 per cent of the
● total shipment from North to East China.²⁸

VI. DOMESTIC TRADE

428 As its final goal, Communist China aims
655 at the complete control of domestic trade by
state-owned co-operatives and state "capitalis-
tic" enterprises.

A. State-Owned Companies

Six domestic trading companies were established in 1950: (1) the China Food Company, (2) the China Textile Company, (3) the China Salt Company, (4) the China General Merchandise Company, (5) the China Coal and Building Materials Company, and (6) the China Native Products Company.²⁹ These companies have established branches and sub-branches in nearly all of the major cities of East China. Some of these companies such as the China General Merchandise Company and the China

27. Ching-chi Chou-pao [Economic Weekly], Shanghai, May 25, 1950, Vol. X, No. 21, p. 9; Ching-chi Nien-pao [Economic Year Book], Hong Kong, Ching-chi tao-pao She, 1952, p. 27.

28. Ibid.

29. Yuan-li Wu, An Economic Survey of Communist China, New York, Bookman Associates, 1955, p. 380.

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438 Native Products Company have established
 655 branches in the rural areas. The trade volume of state-owned concerns has grown very rapidly. If we take the trade volume of 1950 as 100, the index for 1952 was 397 for the country as a whole. The regional trade of East China was proportionally higher during the same period.³⁰ According to the first Five Year Plan, as reported by Li Fu-ch'un,³¹ the Communists estimate that by 1957 the total volume of trade will be 133.2 per cent over 1952.

State trade is expanding day by day while private trade diminishes. Eight large trading companies in Shanghai have signed contracts with 116 different fields of industry (over 8,000 factories) to purchase commodities for domestic supply and for foreign trade. According to a report in the Ta-kung Daily, Tientsin, at least forty-six industries in great financial difficulty were benefitted by advanced contracts with the eight state trading companies in Shanghai.³²

B. Co-operative Companies

474 The supply and marketing co-operative in
 438 Communist China is a co-operative organization
 443 formed under government directives. Its

30. People's China, Peking, Jan. 16, 1954, p. 5.

31. Kung-shang-chieh [Industry and Commerce] Peking, Aug. 10, 1955, No. 8.

32. Ta-kung Pao [Ta-kung Daily], Tientsin, June , 1955.

474 capital is made up of shares contributed by
438 members. It supplies members with farm
443 implements, fertilizer, and other daily
necessities and markets their agricultural
produce and the products of rural industries.
The state trading companies and the branches
often make advance contracts with the co-
operatives by supplying them their products at
fixed low prices. The exact number of the
supply and marketing co-operatives in the East
China area is not known, but a rapid develop-
ment was certainly carried out during the period
1953-55. Up to the end of the third quarter of
1955, all of the cities of East China had
established supply and marketing co-operatives
and each hsiang of the region had at least one
such co-operative. According to the latest
information available, these co-operatives did
one quarter of the total national retail trade
in 1953, or 18 per cent of the retail trade in
cities and 30 per cent in the rural areas; and
about 75 per cent of all the purchases made by
the co-operatives were on behalf of the state.³³
The percentage of the total retail trade done by
these co-operatives must have at least doubled
by 1955.

33. Far Eastern Economic Review, Hong
Kong, May 12, 1955, Vol. XVIII, No. 19,
p. 597.

C. Private Companies

472 This category includes private traders
438 and individual dealers who, according to govern-
ment policy, are led gradually along the road
to state-capitalism. As the result of the
growing monopoly of state-owned companies,
the private wholesale dealers will be squeezed
out of business or transformed into retail
traders acting as agents of the state trading
companies. All retail traders must undergo
socialistic transformation. According to the
most recently available report, about one-third
of Shanghai's retail traders have been "trans-
formed" under state capitalism.³⁴ For example,
the Wing On Company, the "Marshall Field of
Shanghai," has been forced to maintain its
business at the lowest subsistence level.
According to the report of Kuo Lin-shuang,
general manager, the company's business has
dropped sharply since 1950. The total volume
of sales decreased 52.87 per cent in 1954
from the previous year, and at one point during
1954 income was not sufficient to pay employees'
wages³⁵ By the beginning of 1955, proper
adjustments were made and a petition had been

34. Ta-kung Daily, Hong Kong, July 15, 1955.

35. Industry and Commerce, Peking, June
10, 1955, No. 6, p. 17.

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472 submitted to the Central People's Government
438 asking that the Wing On Company be made an
● agent of the state trading companies. In
March 1955, the petition was approved. The
Wing On Company signed contracts to sell
forty-eight classes of commodities, and agreed
to sell fourteen additional kinds of commodities
on a commission basis on behalf of the state
companies. Under these arrangements the
business showed considerable progress in
April 1955, with a sales increase of 98 per cent
over the same period in 1954.³⁶

In the campaign for the socialistic transformation of domestic trade, East China showed remarkable progress. Among the thirty-nine principal cities of the region, about 5,928 wholesale dealers were chosen for transformation in 1954. By November 1954, some 4,573 dealers (76 per cent) had been transformed, and most of the employees of these wholesale firms were reassigned to other jobs after a few months of thorough training.³⁷ Over 90 per cent of the retailers had been transformed.³⁸

36. Ibid., p. 18.

37. Ibid., Jan. 10, 1955, No. 1, p. 36.

38. Ibid.

- 472 The Communist authorities have adopted
● 438 several types of "socialist transformation":
(1) the agency, (2) purchase or sale on behalf of state trading companies or supply and marketing co-operatives, (3) combined operation of a few similar retail traders, with separate accounting and finance, and (4) co-operative operation and management. In most of the rural areas throughout the East China provinces, retail traders and peddlers were transformed under these terms.³⁹ The income of an ordinary retailer remained low and was hardly sufficient to maintain a family on the lowest subsistence level. For example, in April 1955 in Chen-hai, Chekiang Province, the average per capita income⁴⁰ of the retail dealer in bamboo-products was only ¥16 (US\$ 6.4). Private traders, unable to subsist, will change their profession sooner or later.

D. State "Capitalism"

- 475 Under state "capitalism," the state
438 trading companies or the supply and marketing co-operatives designate private commercial

39. Ibid., May 10, 1955, No. 5, p. 23.

40. Tsu-kuo [China Weekly], Hong Kong, Aug. 22, 1955, No. 138, p. 12; Ta-kung Daily, Tientsin, June 21, 1955.

475 firms as distributors for their products on
438 a commission basis. Private merchants purchase commodities from state trading companies at wholesale prices and resell them to the consumers at retail prices fixed by the state. Joint state-private ownership replaces private capitalist ownership, and the state usually invests capital in trading firms under joint management.

Early in 1955 in Shanghai, the largest city in the eastern hemisphere, wholesalers dealing in lumber, salt, and miscellaneous grains and oil cakes carried out the process of state capitalism for the trade. Through labor-capital consultations, 175 out of 220 wholesalers of the above-mentioned trades petitioned for suspension of business. Some 35 changed to retail trade, 6 changed their profession, and 4 have continued in business under state guidance.⁴¹ Other Shanghai wholesalers dealing in steel, iron, other metals, oils, fats, pharmaceutical products, ham, preserved meats, stationery, and precision instruments underwent "socialist transformation" in the period January-April 1955.⁴² It was estimated⁴³

41. NCNA, Shanghai, May 14, 1955.

42. Survey of China Mainland Press, May 20, 1955, No. 1052, p. 20.

43. Ibid.

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- 425 that some 52.3 per cent of all private whole-
438 salers would have been transformed during
● the first six months of 1955.

VII. FOOD RATIONING AND GRAIN TRADE

434 Rationing was first applied to food grains on November 19, 1953, in a government order for the enforcement of "planned purchase and planned supply of grains," designed to secure foods required for people's livelihood and national construction and in order to stabilize food prices and eliminate food profiteering. Under this order, all businesses engaged in the sale of grain or other essential foodstuffs were, in principle, to be taken over by the state, which would determine rations and fix the official purchasing price as well as the retail selling price of various kinds of grains. 44

In order to facilitate the work of rationing in all cities, industrial and mining districts, and in rural areas where grain is not produced in surplus, state grain markets were set up throughout the whole country. As of July 1954,

44. Far Eastern Economic Review, Hong Kong, May 12, 1955, No. 19, p. 604.

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Table 8.
The Native Products Fairs of East China-1952^a
(units: million S-Chinese yuan
million S-US dollars)

Name	Locality	Native Products (per cent)	Manufactured Products (per cent)	Total Trade Volume
Hua-tung Fair	Shanghai	64	36	\$1,743,100 (872.6)
Su-pai Fair	Yang-chow	—	—	\$10,700 (50.4)
Su-nan Fair (1st)	Wu-hai	—	—	\$12,000 (56.8)
Su-nan Fair (2nd)	Wu-hai	54	46	\$223,900 (89.3)
Su-nan Fair (3rd)	Wu-hai	34	66	\$121,000 (55.1)
Nanking Fair	Nanking	48	52	\$113,900 (54.7)
Shantung Provincial Fair	Taiwan	—	—	\$187,400 (87.9)
Shantung Provincial Fair (2nd)	Taiwan	—	—	\$211,000 (86.8)
Tsingtao Fair	Tsingtao	51	49	\$322,700 (153.4)
Chekiang Provincial Fair	Hangchow	40	60	\$71,300 (32.9)
Chekiang Autumn Fair	Hangchow	—	—	\$316,000 (151.1)
Wan-nan & Wan-pai Fair	Hefei	—	—	\$88,000 (33.8)
Wu-hu Fair	Wu-hu	—	—	\$50,800 (22.3)
Fukien Provincial Fair	Foochow	58	42	\$146,100 (60.1)
Fukien Autumn Fair	Foochow	42	58	\$45,300 (21.4)
Total				\$3,666,800 (\$ 152.8)

^aChing-chi Chou-pao /Economic Weekly/, Shanghai, May 28, 1953, No. 21, pp. 8-9.

(Table 8 faces p. 873)

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146 It is evident that the amounts of rice rationed to various classes of workers are far below normal requirements as measured in terms of calories. With rice in short-supply, the people are often unable to buy their minimum ration.

- 438 Since 1951, in order to stimulate trade and to facilitate the interflow of commodities between city and country, the Chinese Communists have held a number of "Native Products Fairs" in most of the principal cities throughout East China.

[See table next page
-- Analyst]

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The total trade volume of these fairs during 1952 amounted to 3,666 billion yuan in old currency (US\$152,800,000) of which the trade fairs in Shanghai accounted for almost half. Shanghai is the main source of supply for most of the daily necessities of the country.

VIII. CONCLUSION

To sum up, commodity movements between the regions of East, North and Central-South China are by railway, coastal shipping, and, to a lesser degree, by inland waterway transportation. The transportation facilities between East and Southwest China are inadequate; only the Yangtze River serves as a means of transportation between the principal East China river port and those of Szechwan Province. Highway and air transportation, as a whole, play only a minor role in the East China Region.

The Ying-t'an--Amoy Railway, which is now under construction, will aid in the development of the lumber and agricultural resources of Fukien Province. The construction of the Ying-t'an--Amoy Railway in East China, like that of the Li-t'ang--Chan-chiang Railway, was not announced until its completion. As late as November 1955 the exact route of the Ying-t'an--Amoy Railway had not yet been made public. Its primary value is military. The timely building of this railway will facilitate transportation.

48% of troops and military supplies to the coastal area near Amoy, and, therefore, the strategic importance of this railway should not be minimized.

Grain rationing in East China has encountered more difficulties than in any other region in China, especially in such large cities as Shanghai and Nanking, where the increase in population has been greatest. The greater the demand for grain in the cities, the stricter the rationing of grain becomes in the rural areas; farmers are expected to produce far more. The heavier the burden imposed upon these farmers, the lower their morale. The present Back-to-the Village Campaign, as enforced in Shanghai and other East China cities, does not seem to be an effective remedy.

As the result of the state monopoly in both domestic and foreign trade, most private commercial firms have been forced out of business or have undergone "socialist transformation." Almost half of the population of Shanghai is engaged, directly or indirectly, in domestic trade. In 1955, about 30 per cent of the private merchants were unemployed and the remainder were struggling to maintain themselves with little prospect of a living wage.

THE SETTING

505 The opening of the Yangtze to steam navigation by about 1862
438 following the Treaty of Tientsin (in 1858 between China and Great
496 Britain; the commercial section of the treaty was not completed
until 1860) ensured the ascendancy of Shanghai over rival southern
ports by allowing the trade of central China to drain by its natural
route, and within a very few years reduced to a trickle the formerly
large volume of trade overland from points outside the Hsi system to
Canton, via the Cheling and Meiling passes. The beginnings of high-
way and railway development in China (map 8) have added to
the trade carried by the Yangtze system, by acting as feeders, just
as any increase in the economic activity of central China will be re-
flected in more intensive use of its major trade artery. The Hankow-
Canton railway, completed through the Cheling pass in 1936, has
tended to augment the volume of goods carried by the Yangtze
toward and from Shanghai, and the same has been true of the
older railway built in 1910 by the French from Kunming in Yünnan,
near the upper navigable reaches of the Yangtze, to the seaport of
Hanoi in French Indo-China. With a complete and well-organized
rail network, transport use of the Yangtze may eventually decline
in relative, though not in absolute importance. At least as far up-
stream as Hankow, railway development may never supplant it as
the major carrier in the lower river basin.*

496 Complementary to the natural focus of water routes, and con-
comitant with the growth of the city, two of China's major rail-
ways (Shanghai-Nanking, with connections north to Tsinan, Tien-
tsin, and Peking, and west to Chenghsien and Sian; and Shanghai-
Hangchow-Ningpo, with connections west to Nanchang and
Hankow and south to Canton) terminate at Shanghai (map 8),
and a small network of motor roads links the city with most of the
other centers of the lower Yangtze basin. The gathering of rail and
highway routes at Shanghai is however a reflection of rather than a

* The importance of the Yangtze as a carrier in future competition with well developed railways may perhaps be compared with the current importance of the lower Rhine, below Mannheim. Although it runs through the heart of a major industrial region with one of the densest and most heavily traveled rail nets in the world (including lines along both banks of the river), the Rhine and its tributaries consistently carry a larger volume of goods than the combined railway lines through its basin.

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Chinese commercial houses in Hankow were branches of Shanghai houses.*

The foreign merchants at Shanghai, aware that their trade was increasingly based on the commercial exploitation of the entire Yangtze basin now made possible by the new treaty, combined in 1868 to finance an expedition under the leadership of Alexander Michie and Robert Francis to explore the trade of the upper Yangtze. The leading American firm in Shanghai, Russell and Company, paid the travel expenses of the expedition by steamship as far as Hankow, and the remainder of the expenses were met by the Shanghai Chamber of Commerce, from which body the members of the expedition had been selected.

The report of these delegates, published in 1869, stressed the importance of water transport in the trade of major commercial centers along the Yangtze, and in the overall movement of domestic trade to and from Shanghai. They noted the extensive tea shipments moving via the Kan River and its tributaries and Poyang Lake to Kiukiang and Hukow and thence via the Yangtze to Shanghai. They commented on the widespread water connections of Hankow, via the Han River system, which brought tea, hides, hemp, timber, and vegetable oils for transshipment to Shanghai, and via the Hsiang River system, which brought mainly tea and cotton. Szechuan sent hemp, hides, bristles, tea, vegetable oils, and opium via the Yangtze to be transshipped at Hankow for Shanghai, these goods having originally been assembled at Chungking via the Chialing, Yangtze, and Min Rivers.¹¹

British dominance of the trade of the newly-established treaty ports was secure, but the organic connection between the growth of their primary stronghold at Shanghai and a similar dominance of the Yangtze hinterland which fed it was perhaps the most compelling reason for the early development of Britain's traditional sphere of influence in central China and throughout the Yangtze basin. In north China they could better afford to give ground later in the nineteenth century to Russia and Germany, and in the south to

* The British consul at Hankow notes this pattern in his trade report for 1865, which further emphasizes the conditions of Yangtze trade favoring a monopoly by the large Shanghai firms.

KEY FUNCTIONS

Other Trade Goods

439 Shanghai was fortunate in that as China's monopolies of the tea and silk trade disappeared by about the turn of the century, the Yangtze continued to concentrate there for export a large proportion of the goods which now became the staples in China's more diversified foreign trade (table I). These goods: vegetable oils, hides, skins and bristles, eggs, and fibers, were staple products of the Yangtze basin, and their marketing in Shanghai was as logical as that of tea and silk. In this new trade, Hankow was the principal inland collection and distribution center, but as with tea, its direct exports overseas remained slight, and actually decreased after 1880 when steam navigation on the Yangtze had become firmly established.³⁵ Hankow sent the bulk of goods destined for export to Shanghai for transshipment.

438 Hankow's water connections enabled it to draw these goods not only from Szechuan, Hupeh, and Hunan along the Yangtze itself but also from Shensi, Honan, Kweichow, and Kwangsi via Yangtze tributaries. Szechuan led all the other provinces in the production of wood oil (tung oil), wax and tallow, and bristles, and was a leading producer of hides and skins, fibers, and other vegetable oils. Production of vegetable oils, raw cotton and other fibers, and eggs was also important in the lower Yangtze basin in Anhwei, Chekiang, and Kiangsu. While their production was less localized than was the case with tea and silk, and also because of this scattering, Shanghai had easier, cheaper, and quicker transport connections than any other leading port with these or other producing areas. The Yangtze also enabled Shanghai to exchange its foreign imports (and after 1920 increasingly its own industrial production) for export goods over a wider market and with greater ease and cheapness than rival commercial centers.

669 The disruptions of the Taiping Rebellion and attendant local
175 uprisings (1850-1864) were heavy in the Yangtze delta, and the largest military campaigns were fought there. Shanghai itself acted as an invaluable base for the efforts of the Ch'ing government to suppress the rebellion, since with the support of foreign troops and volunteers, the city was able to hold out against a rebel tide which

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engulfed every other delta city of importance. It was from Shanghai that the famous "Ever Victorious Army" (composed of both Chinese and foreigners led by the American Frederick Ward and, after his death from wounds, by the British Major Charles ["Chinese"] Gordon) conducted its decisive campaigns on behalf of the Ch'ing government against the Taipings and retook all the delta cities before the eventual recapture of Nanking in 1864. Shallow-draft boats carrying both bombardment guns and troops and using the pattern of delta waterways leading from Shanghai gave this army a crucial advantage of mobility against the numerically greatly superior Taiping forces.

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Shanghai's land and speculative boom and the defense of its boundaries during this period are briefly discussed above in Chapters One and Two, but two other results of the rebellion were of greater significance: the establishment of the Imperial Maritime Customs, with the commercial advantage which this gave to Shanghai (see below, Chapter Eight); and the damage to the tea and silk industries (which were concentrated in the delta and its immediate environs) together with the blocking of the normal trade routes, which was followed after 1862 by new opportunities for the expansion of a more diversified trade. Shanghai suffered substantially from the losses inflicted on its trade in these two key commodities. But the pliability of the Ch'ing government, in recognition of the fact that foreign military assistance from Shanghai was instrumental if not decisive in the suppression of this mass rebellion, played its part in the granting of free navigational rights on the Yangtze, more from apprehension than from gratitude. The foreigners, undismayed by the illogicality of their position from a diplomatic point of view (British naval and land forces were attacking Taku and Peking at the same time that British forces were fighting against the Taipings in the delta area), were encouraged by their military successes to press their demands for wider commercial opportunity. The rebellion revealed Shanghai's vulnerability as long as its trade was so heavily dependent on the two local or semi-local staples of tea and silk, and at the same time re-emphasized possibilities for a broader and larger trade in the Yangtze valley as a whole. Though the trade in tea and silk recovered rapidly after the fighting (see table I),

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KEY FUNCTIONS

- 438 stopped the marked growth in Shanghai's total trade was due predominantly to the opening of the Yangtze, and it was this new commercial sphere with its new commodities which after 1880 increasingly supported the city.

Shanghai's commanding position for marketing is revealed in the fact that between 1860 and 1930 it accounted for an average of 68 per cent by value of the total re-exports of goods from Chinese ports to Chinese ports. For the period 1925-1935, goods re-exported from Shanghai to Chinese markets went (according to percentages of the total value of such exports) to Kiangsu and other provinces as shown in the accompanying table.³⁸

Kiangsu	18	Szechuan	8
Chekiang	17	Honan	6
Anhwei	16	Fukien	3
Hupei	11	Shantung	2
Hunan	9	Other	1
Kiangsi	9	TOTAL	100

In a largely pre-industrial economy still characterized for the most part by local rather than regional or national markets, these figures show a truly remarkable areal extent over which Shanghai was able to market (and to purchase) its goods, and the degree to which Shanghai served as the dominant place of exchange for China as a whole. They suggest a close relationship between the size and areal distribution of the market and the waterways and sea routes which focus on the city.

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438 Political and military events in 1926, and later during 1937 and after, re-emphasized the importance to Shanghai of this water network for the supply of its trade and industrial goods and for the distribution of its exports. Civil war was widespread in the middle and lower Yangtze basin during the latter half of 1926 as part of the campaign of the Kuomintang against the local and northern warlords. Commandeering of boats, including native craft and 13 out of the 31 Yangtze steamers of the China Merchants Steam Navigation Company by December 1926, led to the suspension of nearly all river sailings between Shanghai and Hankow by Chinese vessels before the end of the year. British and Japanese shipping

TRANSPORT ROUTES

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firms continued to operate, but under difficulties, and they could not handle more than a small fraction of the normal volume of trade on the river. As a result, sales of piece textile goods in Shanghai had fallen by January 1927, to one quarter of their August levels. The kerosene trade out of the city was badly hit, and large stocks accumulated in warehouses. Imports of Chinese tobacco leaf to Shanghai virtually ceased by January, and forced the closure of several of the large cigarette factories. Egg imports to the city in January were less than 30 per cent of normal. By the end of 1927, with order restored in the Yangtze basin and navigation no longer interfered with, Shanghai's trade with its hinterland returned to normal levels. Both railway lines serving the city remained in regular operation for all but a few days during this period.³⁷

In November 1937, in order to hamper Japanese naval movements on the Yangtze, the Chinese Government placed booms across the river at Kiangyin and Chinkiang, and fighting in the delta area and upstream from Nanking further disrupted traffic. The value of Shanghai's foreign trade fell by 76 per cent between July (hostilities began at Shanghai on August 13, 1937) and December 1937, as much because of the interruptions in transport as because of the local fighting, which ended at Shanghai itself in October. During the same period, the total value of the foreign trade of China as a whole decreased by only 2 per cent. Shanghai's relative decline continued through 1938, with a 49 per cent decrease in imports and a 63 per cent decrease in exports over the 1927 figures, while for the same period the total foreign trade of China increased by 8 per cent.³⁸ With its water connections disrupted, Shanghai could no longer compete commercially with rival centers, which despite the progress of hostilities over nearly the whole of east China by the end of 1938 increased the total of their trade at the expense of Shanghai.

But the disruptions of war should not obscure the fact that the Yangtze basin is the economic heart of China, nor that its river system will continue to be a basic element in China's transport pattern. The city at the mouth of the river will remain a metropolis under whatever conditions the future or the Communist Government of China may impose.

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THE TRADE OF THE PORT

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TABLE III

Foreign and Domestic Trade of Leading Chinese Ports, 1870-1920*

(Gross values of trade, in millions of hai-kuan taels, landed at or shipped from the leading treaty-ports in China in each year listed.)

	1870		1880		1890	
	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic
Shanghai	90	96	88	112	101	136
Canton	28	24	30	26	28	24
Hankow	18	16	21	25	14	42
Tientsin	15	9	16	14	18	25

	1900		1910		1920	
	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic
Shanghai	160	181	316	382	504	532
Canton	34	26	47	38	59	46
Hankow	15	52	13	58	13	73
Tientsin	32	38	64	68	108	117
Tsingtao	5	4	15	9	14	12

SOURCES: Figures compiled from China: Maritime Customs, *Annual Reports and Returns of Trade*.

* i.e., the domestic trade which was recorded by the Maritime Customs, only a part of the total volume of domestic trade at each port, or of China as a whole.

TABLE IV

Foreign and Domestic Trade of Leading Chinese Ports, 1925-1935*

(Average percentages of foreign and domestic trade by value passing through leading Chinese ports (exclusive of Manchuria) over the period 1925-1935).

Port	Foreign	Domestic
Shanghai	55	38
Tientsin	11	8
Canton	6	4
Hankow	4	6
Tsingtao	4	2

SOURCES: Recorded by the Maritime Customs. Data from Jones, 1940, pp. 58-9.

* i.e., the domestic trade which was recorded by the Maritime Customs, only a part of the total volume of domestic trade at each port, or of China as a whole.

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KEY FUNCTIONS

651 commercial growth, Shanghai in the van, could prosper with accelerating vigor.*

By 1864, offices of the new customs service had been established in all of the treaty ports, and its records of treaty-port trade are complete from that year. Maritime Customs figures for each treaty port, however, cover only the imports and exports to and from foreign countries, and the domestic coasting and river trade carried in foreign-built or foreign-type bottoms, whether Chinese- or foreign-owned (i.e., excluding junks, sampans, and rafts, but including lorchas, small sailing boats with a foreign-type hull and Chinese-type superstructure and sails). The trade carried in junks, sampans, and rafts, and the domestic overland trade, was the responsibility of the so-called "Native Customs," the original Chinese customs, which by the Boxer Protocol of 1901 was put under the control of the Maritime Customs at and within 15 miles of each treaty port. The figures of the Maritime Customs may be assumed reasonably accurate and complete for the categories which they cover, aside from smuggling, but the figures of the Native Customs are neither accurate nor complete. This is due in part to the inadequate numbers and inefficiency of the staff, and in part to the difficulty of regulating or measuring a trade brought into the port by a multitude of large and small water craft or by coolie and cart transport as well as by rail and truck.†

438 Perhaps a majority of the trade between Shanghai and the rest of China which was carried by coolies and carts, or by sampans, rafts, and junks by sea or by the variety of inland waterways leading from the city, was not recorded. Customs officials and other observers have estimated that as much as a quarter of the total domestic trade of Shanghai was not recorded.⁹ Maritime and Native Customs figures for Shanghai also omit trade passing through the port on "trans-

* The steady revenue derived from Maritime Customs became a most important financial support of the Ch'ing government, in time its leading source of revenue, and thus made it dependent on the continuance of trade. Customs revenues were also used repeatedly as security for foreign loans and indemnities, symbols of the commercial and political processes at work. Thus was imperial China confounded by the merchants of the West.

† Complete statistical records of the Native Customs are unfortunately not available in this country.

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shipment passes" to or from other Chinese ports, even though goods traveling on such passes may be stored, repacked, and reloaded at Shanghai. For all of these reasons, it must be assumed that the trade between Shanghai and the rest of China was considerably greater than recorded, and that the city's role as a transshipment point was thus more important than the combined customs figures would indicate. 438 ●

With this major limitation, the customs figures nevertheless show that nearly half of the trade of Shanghai was transit trade. Graph 8 shows that re-exports (by value) to Chinese and foreign ports between 1885 and 1935 were consistently more than half of the total value of Chinese and foreign imports combined, and until after 1915 were greater in value than foreign imports alone. Until after 1920, the value of re-exports was more than half of the value of the gross trade, less exports of local origin. The break which comes between 1915 and 1925 is a reflection of the growth of manufacturing in Shanghai, which took increasing proportions of the city's foreign and Chinese imports and produced a sharp rise particularly in the value of exports of local origin, as well as in the value of all other trade categories except re-exports. 439

Graph 7 gives a similar picture of the city's trade, in terms of volume by weight. Discrepancies with graph 8 are due primarily to the greater weight per unit of value of imported industrial raw materials consumed in the city than of the imported finished goods subsequently re-exported. Nevertheless, re-exports in 1910 totaled about one half of combined Chinese and foreign imports by weight, and it was not until 1920 that manufacturing in the city claimed a majority of all imports by weight. In that year also, original exports equalled re-exports of Chinese goods and exceeded re-exports of foreign goods by weight. Slightly larger proportions by weight of Chinese than of foreign goods were re-exported in all of the three years represented in graph 7, indicating their greater weight per unit of value (predominantly food and unfinished goods) than foreign imports (predominantly finished goods). According to the Customs figures, Chinese imports into Shanghai in 1920 and in 1930 were, in rough order of value: coal, raw cotton, foodstuffs, raw

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438 silk, tobacco, tea, vegetable oils, hides, skins, and bristles, vegetable
439 fibers other than cotton, and wool.

Graph 6 gives further details on what Shanghai did with its imports from the rest of China, and where it sent the growing volume of original exports produced by manufacturing after 1900. Through the entire period 1870-1930 as shown on the graph, Shanghai re-exported a total of well over half of the value of its imports of Chinese goods, and until after 1920 the proportion averaged about 90 per cent. (The value of foreign imports during most of this period is given in graph 8.) In every year shown on the graph, re-exports abroad were considerably greater by value than re-exports to the rest of China, a reflection of Shanghai's function in collecting from the Chinese hinterland and exporting to industrial economies overseas the assortment of raw materials shown in table I. However, Shanghai's original exports went about half and half to Chinese and foreign ports until 1910, and after 1920 went predominantly to the former, an indication of Shanghai industry's dependence on the domestic market. The sharp rise in Chinese imports and the fall in total re-exports between 1920 and 1930 indicate the increased proportion of the city's imports which were absorbed by manufacturing.

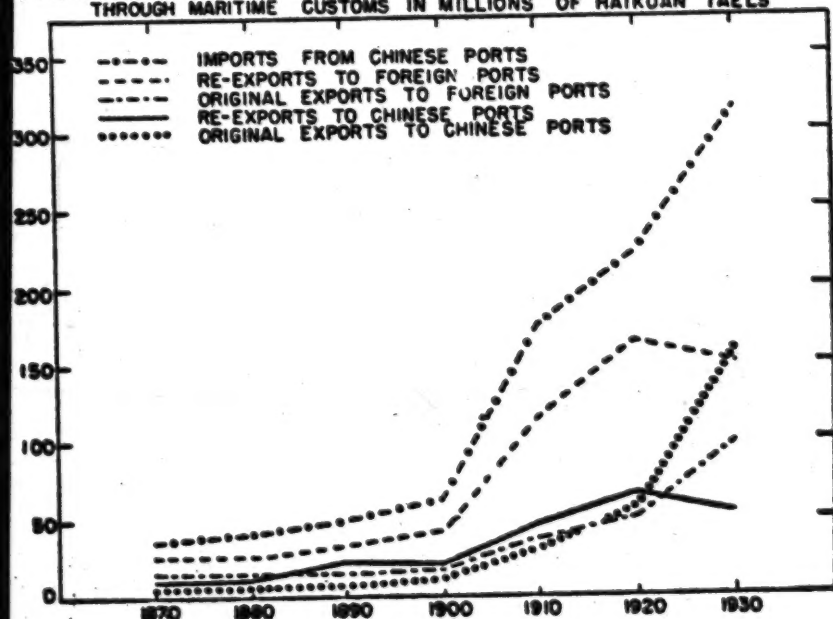
In 1893, the Commissioner of Customs at Shanghai described the trade of Shanghai as follows: "Excepting the small amount used locally, the bulk of the produce which comes here from Chinese ports or from foreign countries goes away again in some channel—the ocean, the river or the creeks—in a vessel which may be a large steamer or may be a little more than a sampan."¹⁰ While the proportion of re-exports increasingly declined as manufacturing developed in Shanghai after 1895, the city's function as a transshipment point continued to depend in large degree on its water transport connections as they are described in the Commissioner's statement.* It is in measuring this domestic trade that accurate figures are unfortunately lacking, since so much of it was carried in

* At the risk of stating the obvious, it should be pointed out that this function of Shanghai as a break-in-bulk (or transshipment) point was an important factor in the rise of manufacturing in the city. This is of course an illustration of Cooley's classic theory (C. H. Cooley, "The Theory of Transportation," Publications of the American Economic Association, IX: 1-148 [1894]).

[p. 129]

TRADE MOVEMENT AT SHANGHAI, 1870-1930

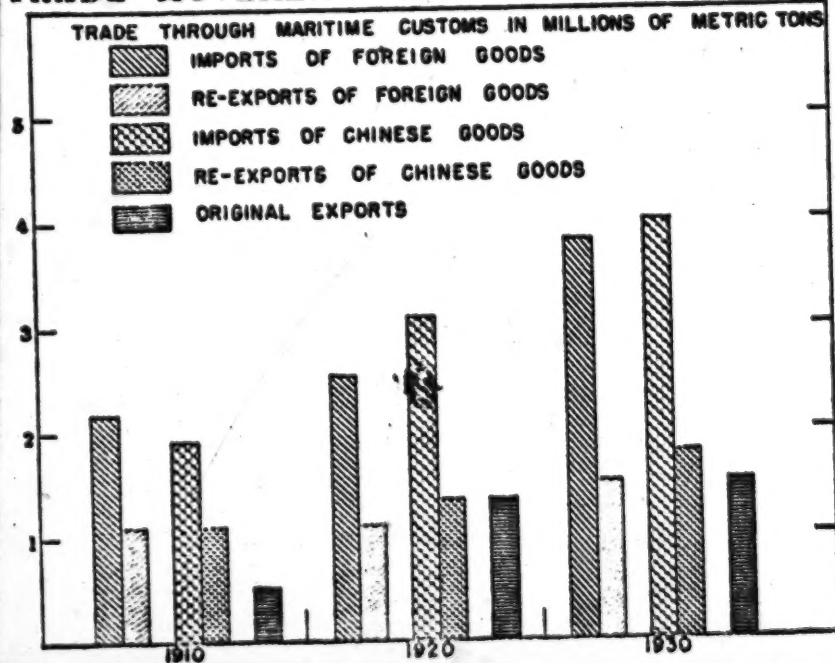
THROUGH MARITIME CUSTOMS IN MILLIONS OF HAIKUAN TAELS

438
439

Graph 6

TRADE MOVEMENT AT SHANGHAI 1910-1930

TRADE THROUGH MARITIME CUSTOMS IN MILLIONS OF METRIC TONS



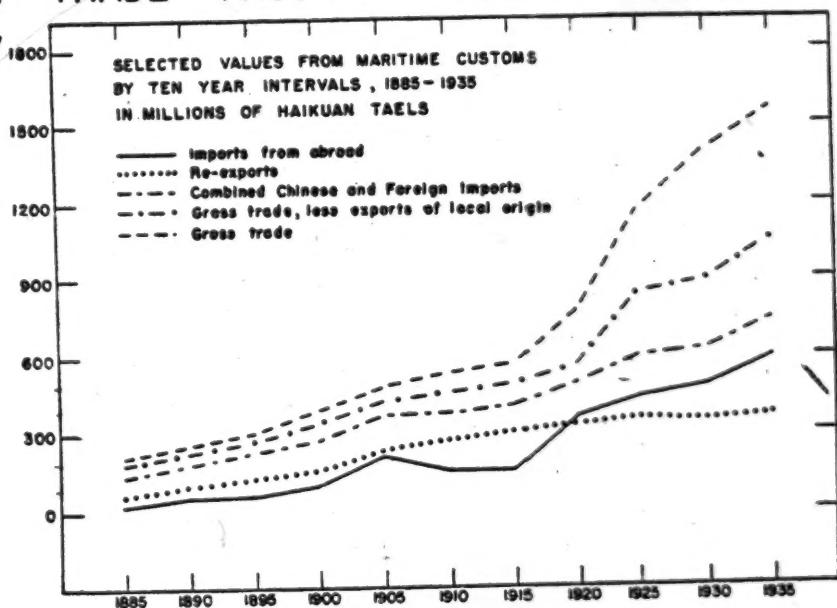
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438 Chinese vessels beyond the purview of the Maritime Customs. We
 439 are obliged to rely on reasoned estimates by customs officials and
 other observers, and on the partial evidence contained in customs
 records.

505 Shipping from foreign ports entering Shanghai averaged about
 650,000 tons monthly from 1933 to 1936 inclusive, according to the
 records of the Maritime Customs. During the same period, coastal

TRADE PASSING THROUGH SHANGHAI



Graph 8

505 shipping entering Shanghai through Maritime Customs averaged
 about 640,000 tons monthly, while shipping entering from inland
 (i.e., Yangtze River) ports averaged about 250,000 tons monthly.
 These figures are exclusive of Native Customs, which recorded at
 Shanghai during 1930 a total of 54,410 junks entered and cleared
 (no tonnage given).¹¹ Combining the Maritime Customs tonnage
 figures, and adding a conservative 20 per cent for the recorded and
 unrecorded shipments by junk and sampan, gives a total for coastal
 and inland shipping (640,000 tons plus 250,000 tons plus 20 per cent,

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or 1,068,000 net tons monthly) 40 per cent greater in volume than shipping from foreign ports (650,000 net tons monthly). Among the domestic imports, food and industrial raw materials for the city, and among the exports, products of Shanghai manufacturing (or original exports) probably accounted (as we have seen in the above analysis of graphs 6, 7, and 8) for 50 to 60 per cent of these shipments to and from Chinese ports, but the remainder, or 40 to 50 per cent, was transit trade.* 505 438 439

Other published estimates corroborate the estimates of the relative importance of Shanghai's transit trade given above. The *Journal of The British Chamber of Commerce* at Shanghai in its issue for February 1920 estimates that about 65 per cent of the shipping of all types entering and clearing Shanghai was destined to or from coastal or Yangtze River ports, and only 35 per cent was engaged in overseas trade. Bowman estimates that about 50 per cent of Shanghai's imports of foreign goods were re-exported to ports on the Yangtze — 20 per cent to ports below Hankow, 15 per cent to Hankow itself, and 15 per cent to ports above Hankow.† In the cotton trade, Fong Hsien-ting estimates that between 1920 and 1930 Shanghai accounted for an average of 80 per cent of China's total exports of cotton piece goods, although less than 60 per cent of this 80 per cent was produced in Shanghai.¹²

Finally, published citations of the records of the Native Customs at Shanghai add a not inconsiderable figure to the total values of domestic trade as shown in graphs 6 and 8. The Native Customs in 1928 recorded total imports from Chinese ports to Shanghai to the value of approximately 65,000,000 Hai-kuan taels, and total exports from Shanghai to Chinese ports to the value of approximately 46,000,000 Hai-kuan taels, or a grand total of 110,000,000.¹³ In 1930, this grand total had risen to over 114,000,000 Hai-kuan 438

* During the same period (1931-1936 inclusive), the railway line to Nanking carried into and out of Shanghai a monthly average of about 80,000 total tons of freight, and the line to Hangchow a monthly average of about 40,000 tons, according to Ministry of Communications, 1931-1936. These two figures combined are less than 12 per cent of the total domestic waterborne trade as estimated in the preceding paragraph (1,068,000 net tons).

† Bowman's estimates take into consideration the unrecorded trade carried in junks and sampans. Of the major Yangtze ports, only Chinkiang, Nanking, and Wuhu have direct rail connections with Shanghai.

KEY FUNCTIONS

- 438 tael.¹⁴ Remembering that these records are far from complete and that the actual domestic trade carried in junks and sampans was probably at least 40 per cent larger, we must assume that the domestic trade of Shanghai was in fact between 20 and 30 per cent greater than it is shown in graphs 6 and 8. The proportion of transit trade was correspondingly greater.

177 As the first and the predominant focus of the opening of traditional China to Western commercial exploitation, Shanghai became, by virtue of its location and especially of its water connections, the great transshipment point for the trade of China which Western enterprise stimulated and directed into wider regional and international channels. Even after the growth of manufacturing in the city, at least half of Shanghai's commerce was transit trade. Trade repeated and transmitted the pattern of ideas, for Shanghai was the center and dispersing point of modern China's revolution.

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have been during the last 1,000 years. Improvements in transport facilities during the same period were slight. As stated above in Chapter Seven, the only railway lines serving Shanghai during the twentieth century were those to Nanking and Hangchow (opened in 1908 and 1909 respectively). They have never become large volume carriers on a Western scale. Highway development contributed even less to the total transport resources of the area. For a densely populated, highly productive area which also contains several large cities dependent in varying degrees on industry, this transport network is minimal.

The Shanghai Rice Market

Rice is the basic food commodity for Shanghai. A sampling survey of workers' families in Shanghai by the Bureau of Social Affairs during 1929 and 1930^{*12} showed the average worker's diet (by percentages of total money spent on food) to be 53 per cent cereals (of which rice was 90 per cent, wheat 5 per cent, and other cereals 5 per cent), 18 per cent vegetables and beans, 16 per cent meat, fish, and eggs, 8 per cent condiments, 3 per cent fruit, and 2 per cent miscellaneous. Since cereals may be presumed cheaper by weight than the other items in the list (as well as having a higher caloric value by weight unit), the importance of rice in the diet by weight (which is the leading consideration for transport problems) is thus greater than these figures indicate. Fortunately, statistics are more readily available for rice than for any of the other food items.

While no complete figures exist to show the rice supply pattern, trading in rice on the Shanghai market was recorded in considerable detail during most of the 1920's and 1930's, and an analysis of the published market reports provides a relatively clear quantitative picture of the main outlines of the city's food supply. The monthly reports issued by the General Chamber of Commerce of Greater Shanghai list supplies of rice entering the city according to source.¹³

* Chiang I-shih, Production, discusses regional differences in the consumption of cereals as between south China, the Yangtze region, and north China, and includes a table showing these differences for the major cereals, as of 1936. For the Yangtze region as a whole he estimates that rice formed 40 per cent of the cereal diet, wheat 20 per cent, minor cereals 14 per cent, and other food crops 26 per cent.

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438 Most of the places so mentioned recur every month except during
489 the rice planting season from early May to early June, and nearly all of them cluster within a relatively small area in the immediate neighborhood of Shanghai (map 5). In about half the cases they are *hsien* towns (county seats), which presumably draw on most of their respective *hsien* (counties), and in the other cases simply towns or villages which serve as collecting places for the rice-producing areas immediately around them. For the most part, they are located with indifference to existing road and railway networks. Most of the exceptions are large towns through which the road and/or railway are obliged to run in any case. The majority of the places however are located on main waterways, and in every case there is a direct water connection with Shanghai.

433 When the rice supply pattern for Shanghai as shown in these
438 reports is compared with total figures for rice production in Kiangsu province by *hsien*,¹⁴ it is seen that for the most part only the heavy rice-producing *hsien* which lie within about 75 miles of Shanghai send amounts to the city significant enough to be recorded consistently in the market reports. If a surplus exists in the other heavy rice-producing *hsien* * then either transport costs to Shanghai are too high for this rice to compete with areas nearer the city and it therefore moves to other consuming centers, or Shanghai can draw sufficient amounts from the nearer areas at a reasonable price to fill the majority of its rice needs.

For example, Kashing, an important rice marketing center on the railway 60 miles southwest of Shanghai sends little of its rice to Shanghai, although it does send large amounts of locally produced ginger. The comparatively high unit-value by weight of ginger can bear transportation costs which make shipment of rice uneconomic by either rail or water in this case. Another rice center, however, 19 miles farther south on the railway, sends large amounts of local rice to Hangchow 39 miles away. It is near enough apparently to be included in Hangchow's tributary rice area.¹⁵

438 Although water transport, especially in this delta area, is relatively
505 easy and cheap, it is also relatively slow, and it is reasonable to find

* Kiangsu government figures indicate that this is the case — *Kiang-su sheng-chien*, cited above.

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438 that for the most part beyond approximately 75 miles from Shanghai,
505 the time-distance-transport costs make water shipment of rice un-
economic under present conditions. It is correspondingly a logical
conclusion that the heavy dependence of Shanghai on this small
local rice-supply area is implemented by the Venetian network of
[435] canals and natural waterways in the immediate hinterland of the
city. Discussions of rice production and marketing in the delta area
state that rice moves to both local and distant markets almost
entirely by junk or sampan, and that in hilly areas with little or no
water transport (such as the country southeast of Nanking, or
west and south of Hangchow) the local market price of rice is
double the price in the delta lowlands.¹⁸

The crucial importance of water transport in the pre-industrial
economy of China as a whole is heightened in the Yangtze delta
area, where water routes are so highly developed. Shanghai lies at
the focus of these routes, and of the level terrain of the delta over
which transport by water can operate at optimum efficiency. This
has been a vital factor in making possible the development of a city
of four million people.

438 The Shanghai rice merchants divide their main supply areas into
439 three categories: a. local rice (roughly from within a 75-mile
radius); b. out-province rice (from Anhwei, Kiangsi, Chekiang,
Kiangsu north of the Yangtze, and at scattered intervals from
Hunan); c. foreign rice (from the Indo-Chinese peninsula, mainly
ex-Saigon, but including small amounts from Bangkok and Ran-
goon).*

435 The factors influencing the rice market in Shanghai and its general
439 behavior through the year throw considerable light on how the city
is fed. These factors (in addition to the amount and quality of the
rice harvest in the main supply areas) may be summarized as
follows:

1. The price of foreign and out-province rice. Average monthly
prices for the three area categories of rice for the period 1920-1936
were approximately as follows: a. (local rice), CNC\$12.00† per

* The export trade in rice from Indo-China, and to a lesser degree from Siam and
Burma, is in the hands of overseas Chinese.

† Chinese National Currency — the Chinese dollar.

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picul (the Shanghai rice picul during this period equalled 172 ⁴³⁵ pounds); b. (out-province rice) CN\$12.40 per picul; c. (foreign ⁴³⁹ rice) CN\$12.30 per picul.¹⁷ At these levels the composition of the rice supply tended to remain stable, with local rice accounting for over 80 per cent of the total. Shanghai in general prefers to eat local rice even when its price rises slightly above that of foreign rice, as usually happens during the local planting season and at certain other times (see below). Foreign rice is a different type from the local product and there is prejudice in Shanghai against its taste and cooking properties. Any great change in these relative prices, however, upsets the balance. When foreign rice is relatively cheap, its Shanghai sales are large, but as fresh supplies continue to be ordered by the merchant groups, the Saigon price rises and the normal price and supply situation is restored. [262]

2. The planting season for rice in the delta area, which lasts from early May to early June. During this period, movements of rice to Shanghai from the delta virtually cease, and the city draws on rice it holds in storage, plus foreign imports. The fact that the planting season usually coincides with the wet period of the plum rains means that the Shanghai price of rice rises sharply from late May to mid-June. New supplies of local rice come into the Shanghai market in early July (i.e., from the previous year's crop, which has been stored in the local collecting centers but which is not moved to Shanghai during the planting season, the greatest peak labor period of the agricultural year). The Shanghai price regains its normal level as a rule before the end of the month. 241 435 438

3. The weather. Hot and/or humid weather tends to rot stored rice, and thus depresses the price by forcing sales, or stimulates it by jeopardizing what is stored. Drought seldom affects harvests seriously in the delta with its network of canals to supply irrigation water. The greatest effect of rain is on the day-to-day movement of rice from local production areas to the Shanghai market. The delta waterways are easily flooded over their banks by rain and wind, and by both in combination with the tide in the stretches which receive tidal inflow from the Yangtze or the Whangpoo.* 132 435 438 505

* This might be deduced from the discussion of the delta above in Chapter Three, and it is referred to specifically in the two journals cited for this account of the rice

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132 The boatmen on these waterways usually refuse to load or unload
 435 rice when it is raining (whether out of regard for their own safety
 438 or for that of their cargo is not clear), and the flow of rice to Shang-
 505 hai stops almost entirely whenever it rains. The Shanghai rice
 market, including foreign and out-province rice, reacts with great
 sensitivity to the rain situation in the city, price changes for rice from
 all sources often following changes in the weather as closely as an
 hour.* The role of the weather in the Shanghai rice market as a
 whole underscores the fact that local sources of rice hold the com-
 manding position, and that the rice moves to the city largely by
 boat. The monthly reports on the rice market refer repeatedly to
 water transport connecting Shanghai with the rice-producing areas
 of south central Kiangsu, but very little mention is made of railway
 transport of rice during the entire period 1920-1936. Highway
 transport of rice is not mentioned at all. The dominance of water is
 so marked that these monthly reports lay great stress on the weather,
 and conclude in one case that "Rain and wind make a great differ-
 ence to the rice merchant's heart."¹⁸

527 4. Traditional festivals, especially the Chinese New Year (a
 435 lunar festival occurring as a rule in early February). Their effects
 438 may be summarized as follows: a. since the New Year is the time
 for settling of accounts as well as for feasting, the farmers need
 cash and sell their rice; the price falls as a result at the beginning of
 the festival period; b. however, the holiday on the farms decreases
 the amount of rice collected and transported to inland centers as
 the festival continues, thus counterbalancing the earlier selling; c.
 banditry resulting from inability to pay debts slows or stops move-

market on an average of ten or twelve times a year, principally from March through July.

* According to records kept by the Public Works Department of the International Settlement at Shanghai (printed each year in the Annual Reports of the Municipal Council from 1920 to 1939), rainy days occurred in the city from 1920 to 1939 on an average as follows:

Number of days on which some rain fell	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	3	4	6	6	8	14	7	5	5	4	4	1
Number of days with rain continuously 6 A.M.-6 P.M.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1	2	4	4	5	8	4	3	3	2	1	1

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ment of rice by water to Shanghai. This last has the greatest effect on the rice market. In general, the Shanghai price of rice tends to rise at New Year about 5 per cent and at other festival times a little less. The above effects of festival periods also demonstrate the leading position of local rice supplies, since the entire Shanghai rice market (including the price of foreign rice imports) reacts at these times to purely local festival activities. Local rice being in short supply, foreign rice is at a premium.

5. Civil disturbances. Movement of local rice to Shanghai is notably interfered with during periods of local unrest, especially when troop movements occur. The boatmen fear commandeering of their boats and expropriation of the cargoes. This was a frequent occurrence during the unsettled political period of the late 1920's, and later during the Japanese attacks on Shanghai in 1932 and 1937, as well presumably as the wartime period and the large-scale civil war which shortly followed it. Civil order has unfortunately not been the rule in this area during the past thirty years. In October 1926, despite an excellent harvest just gathered, large amounts of rice already in storage in Shanghai and the accumulated demand in the city after the mid-autumn festival, a local uprising in Chekiang and troop movements connected with it in Kiangsu brought water transport to a complete halt in the delta south and west of Soochow. As a result, the Shanghai price of rice nearly doubled instead of falling as it otherwise would have done. The railways to Hangchow and Nanking were kept open during the entire period. In this case the rice supply situation was eased by shipments on special order from Tsingpu, Sungchiang, and other nearby areas removed from the trouble.*

* Rice was stored both in Shanghai and in the collection centers in the local producing areas. However, the Shanghai rice market was very sensitive to day-to-day changes in the supply arriving from the local areas. This suggests that relatively small amounts of rice were stored in Shanghai, and that the market depended on regular shipments. When these were interfered with, it was not possible for the Shanghai rice merchants to keep the Shanghai price from rising, since orders for foreign rice could not normally be delivered in less than two weeks. The hiatus in local supplies during the planting season was of course anticipated by the Shanghai merchants in the form of advance orders for foreign rice which were delivered during May and June, but even so the price of rice rose during this period, as indicated above, further evidence that the market was dominated by local supplies moving regularly to the city during most of the year.

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- 438 The general impression from the foregoing summary of factors, and from the market reports themselves, is twofold: firstly, that there is an ample margin of rice supply for Shanghai, from various sources, at all times at least until 1936; and secondly, that by far the largest part of that supply comes from within a radius of approximately 75 miles and moves to the city largely by water transport. There is some statistical evidence which bears on the problem, and the following figures compiled from the records of the Maritime Customs provide as close a check as can be obtained at present.

Local, Out-Province, and Foreign Rice

- 438 The Food Commission of the Bureau of Social Affairs of the City Government (Chinese) of Greater Shanghai published in 1931 a statistical study of the sources of Shanghai's food supply, using figures taken from the records of the Maritime and Native Customs.¹⁹ The study shows a yearly average during the period 1925-1930 of 780,000,000 pounds of rice brought into the city from all sources. This is stated as a rough estimate because there are no means of recording all of the small shipments arriving from the delta by junk and sampan via the many small creeks and canals which converge on Shanghai.

The total figure is broken down in the table below, according to means of entry into the city.

from inland areas via the Whangpoo, Yangtze, or Soochow Creek:	560,000,000 pounds
from the sea via the Yangtze:	160,000,000 pounds
domestic origin	30,000,000
foreign origin	130,000,000
via overland routes (means of transport not specified)	60,000,000 pounds
TOTAL	780,000,000 pounds

- 438 Railway haulage figures²⁰ indicate that nearly all of the 60,000,000 pounds arriving by overland routes came in by rail from cities and towns along the Yangtze toward Nanking, Tanyang, and Changchow in particular. Although these places are on or near the Yangtze, they are farther from Shanghai than its main rice supply areas so

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that rail transport to Shanghai can compete with water transport. Given the lines, one might assume that they would carry the most important product of the delta. The surprising fact is that they carry such insignificant amounts. Total figures given by the railway for rice haulage leave little or no margin for highway transport of rice, and we may assume that it is negligible.

The relatively small figure of 30,000,000 pounds given for arrivals by sea from domestic sources is probably accounted for by small-lot junk cargoes from the northern and southern shores of Hangchow Bay, and from the seaward-extending tip of Kiangsu just north of the Yangtze. South of Hangchow Bay all of the coastal areas import rice to balance their local rice deficits, and north China has no rice surplus for export.

Most of the foreign rice imports to Shanghai, according to the market reports referred to above, are ordered by rice brokers from Nanking, Tientsin, Hankow, and Ningpo operating at Shanghai as China's leading rice market, and this rice is then shipped from Shanghai to their respective cities. At certain periods when the Ningpo rice brokers ordered directly from Ningpo for Saigon rice, Shanghai's stores of foreign rice became superabundant and its price fell sharply, even producing a fall in the price of local rice during the planting season, as in May 1929. All of these cities are relatively more dependent on foreign rice imports than is Shanghai. The focusing of delta waterways on Shanghai, and the relatively less easy transport in the hilly or semi-arid hinterlands of the other cities mentioned, are certainly as important as the concentration of rice production in the delta in accounting for this difference.

The greatest period of foreign rice invasion on the Shanghai market for consumption in the city coincides roughly with the planting season, showing a natural lag of about one month during which Shanghai stores of local rice are drawn on. As soon as new supplies of local rice enter the Shanghai market in July, the situation returns to normal and prices are stabilized. Foreign rice is also ordered by Shanghai merchants when other natural or threatened hiatuses occur in the local supply due to weather, civil unrest, short supply in storage, or price stoppages. As a rule, these breaks in the local supply are short-lived or do not materialize.

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438 With the exception of the planting season, the general price and
439 supply situation is dominated by local rice.

432 Although considerable amounts (unfortunately there is no record
511 of their size) of both domestic and foreign rice entering Shanghai
are resold to or originally ordered by other cities, relatively more
of the foreign imports fall into this category. The table on page 146
above should therefore be interpreted in the light of the ultimate
destination of the several categories of rice shipments arriving in
the city. Total sales of rice in Shanghai, for which relatively more
accurate figures are kept, provide a different indication of the city's
rice consumption. Sales are estimated by the Food Commission's
study as averaging annually 860,000,000 pounds during the period
1925-1930.* Their report assumes that the difference of nearly
100,000,000 pounds between this figure and the total recorded entries
of 780,000,000 pounds is accounted for by unrecorded shipments
arriving by creek and canal from nearby sources. Shipment of much
or most of the foreign rice from Shanghai to other cities would leave
an even greater gap between the two figures as measures of Shang-
hai's consumption, and it is logical to assume that this also is filled
from local sources.

The figure for total sales, however, may not be an accurate indica-
tion of total consumption if we attempt to estimate the average
annual rice consumption of a Chinese adult and multiply it by the
population of Shanghai in 1930. A Chinese economist²¹ suggests
four piculs per year (532 pounds), which, using 3,250,000 as Shang-
hai's 1930 population (graph I) gives a total city consumption of
1,730,000,000 pounds. Or if we use a lower estimate of 400 pounds,²²
which agrees more closely with the writer's experience, and scale
down this figure to 380 to allow for children, for other cereals and
foods in the Shanghai diet (see above, p. 139), and for the non-rice-
eating foreign population of the city (38,000 in 1930), we still arrive
[146] at a figure of 1,235,000 pounds. This is equivalent to about 1,750
calories per day per capita from rice alone, certainly a minimum
diet for a Chinese.

* This figure presumably includes spot sales of foreign rice by Shanghai brokers to
dealers in other cities, but probably does not include foreign rice delivered in
Shanghai on order from other cities.

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upon all of the city's population. A leading commercial journal in the city remarked in 1940 that "Shanghai is an island cut off from the normal sources of supply of its staple food," and went on to point out that rice selling at that time in Wusih for CNC\$15 per picul of 172 pounds sold for CNC\$90 per picul in Shanghai, a price difference which certainly reflects transport difficulties as well as the abnormal situation in Shanghai. The Shanghai price of imported rice quite naturally rose to meet this level.²⁸ At scattered intervals during this period from 1937 to the end of 1941 when conditions permitted relatively safe water shipment to Shanghai from the delta, local rice appeared on the Shanghai market in large quantities and the price of rice from all sources dropped to nearly its pre-war levels.²⁹

The part played by out-province rice is difficult to evaluate. The market reports already referred to indicate that except during the planting season out-province rice is unimportant on the Shanghai market, and at all periods under normal conditions is less important than foreign imports.³⁰ However, complete figures for out-province shipments of rice to Shanghai do not exist, doubtless due, at least in part, to the fact that much of it moves to the city in small boats, a flow difficult to measure. The market reports give the impression that most of Shanghai's out-province supply comes (in order of importance) from Wuhu (the chief rice center of Anhwei), the lowland areas of Kiangsi connected by lakes and rivers with the Yangtze, the lowland areas of northeastern Chekiang, and the western and southern shores of Tung Ting Lake in Hunan. All of these sources have direct water connections with Shanghai.

If the earlier opinion that Shanghai, among the other treaty ports, depended for its growth on overseas imports of rice is no longer tenable, it is perhaps reasonable to question whether at least Canton may not have profited from its similar location. The Hsi delta is the closest parallel in China to the Yangtze delta, although on a smaller scale. Like the Yangtze delta, it is a heavy rice-producing area which also contains a highly developed network of natural and artificial waterways. Kwangtung as a whole is a rice-deficiency area, and foreign imports of rice to Canton may not be destined entirely for

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439 consumption in the city. As in the case of Shanghai, Canton may act as an entrepôt for rice imports to other cities.

433 This may suggest that China as a whole produces enough to feed
489 itself, even by traditional farming methods, if only the food could be transported cheaply enough. As it is, foreign rice moves only to the large coastal cities, because transport costs once it leaves the sea prevent further penetration. The rice comes in because at certain periods it is cheap, and it is cheap relative to Chinese rice primarily because of the difference in transport costs between sea and land. It may be found when full facts are available that the flow of rice to large Chinese cities, which depends on price, is governed predominantly by transport costs, as it is in the case of Shanghai, and that where cheap transport is possible, local sources form the major part of the supply.

Other Food Commodities

241 The Yangtze delta, and more especially the fertile triangle, is a
438 specialized agricultural area, more so than most agricultural regions of China because of its greater degree of commercialization. Its special crop is rice, with cotton, mulberry, and vegetables the only other significant items. Some wheat is grown, but it is of relatively minor importance in the fertile triangle and is raised mainly as a dry-field winter crop between rice plantings. Shanghai's dependence on local sources for rice is thus not matched by the rest of its food supply. The significance of the city's water connections with other agricultural regions is apparent in the fact that in a largely pre-railroad and pre-commercial economy, Shanghai is able to depend on distant sources for many food items in a way, if not to a degree, which is in certain respects comparable to the food supply pattern developed for large cities in the United States and Western Europe.

244 Shanghai has its own truck- and market-garden area, much as
438 large Western cities have, with the difference that vegetables in particular have always been grown there and that environmental conditions in the fertile triangle are virtually ideal for market-garden-type production. Near most Western cities, soil, climate, and relief must often be fitted with difficulty into the needs of the city for fresh local food. Vegetable production in the fertile triangle

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for sale in Shanghai is not only convenient but environmentally advantageous.

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How much of the city's supply of vegetables comes from its market-garden area (a day's water travel, or about a 30-mile radius from the city, an area where vegetables rival rice as the leading crop), and how much from greater distances is difficult to determine with any accuracy in the absence of published records. The principal vegetable market in Shanghai is along both banks of Soochow Creek near its mouth, which suggests that vegetables come into the city by water from its immediate environs. Merchants and vendors there, including many farmers who bring their vegetables into the city by sampan for daily or twice weekly markets, speak only of the near neighborhood of the city as the source of their wares. About 15 square miles within the Municipality of Greater Shanghai itself are occupied by vegetable crops,³¹ which can take the fullest advantage both of convenience to the market and of favorable environment in this fertile flat delta land. Vegetables undoubtedly come into the city in large amounts from greater distances, although it is unlikely that bulk shipments of such perishable commodities would move beyond the delta. The railways do not carry them in any significant quantities.³²

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Although its place in the Shanghai diet is relatively minor (see above p. 139), wheat is a major food commodity for the city because of the prominent place of the flour milling industry there. While over two-thirds of the flour milled is exported, principally to north China ports, the wheat must first be brought to the city even though most of it is not eventually consumed there.

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Shanghai drew its domestic wheat largely from Kiangsu. Only a minor crop within the fertile triangle, wheat is of much greater importance in the drier and colder areas of Kiangsu north of the Yangtze, and in the western parts of the delta. This production, plus the wheat raised almost entirely for sale as a dry-field winter crop within the fertile triangle, can be carried to Shanghai from nearly every producing area via the water network of the delta, including the Yangtze itself. While the delta area is by no means a leading wheat producer, it is wholly unique among wheat areas in China in its cheap and easy transport connections with a large urban

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256 market. The semi-arid north, where most of China's wheat is
● 438 grown, has almost no water transportation. Water in the delta has
487 made it possible for wheat production there to become highly commercialized as Shanghai developed into a huge industrial market which water routes made accessible in terms of transport costs for bulk shipments.* This helps to explain the anomaly of Shanghai (rather than Tientsin — a close second) as the largest wheat-milling center in China despite its great distance from China's major wheat-producing areas where other industrial centers, notably Tientsin, also mill flour.

439 Domestic sources of wheat, however, accounted for slightly less
505 than half of the city's supply during most of the 1920's and 1930's. Although Kiangsu sources held the commanding position domestically, wheat also came to the city especially from the major wheat area of Shantung, by sea from Tsingtao, where it was collected largely by rail. Shanghai's connections by sea thus implemented its water connections in the delta in ensuring a steady flow of low-cost cereals. Dependence on overseas sources for more than half of its wheat was more workable economically for Shanghai, with its location and harbor facilities, than for any other China port. It was cheaper for Shanghai to bring in wheat from Canada, the United States, and Australia (the three major overseas sources in order of importance) than for Tientsin, without inland water transport, to bring in wheat from the producing areas of north China beyond its immediate Hopeh region of the north China plain.

These imports of wheat from overseas fluctuated considerably from year to year according to price conditions. As in the case of rice, wheat imports were unusually high in years of civil disorder and (or) rain and floods in the delta area, notably in 1926, and decreased markedly in intervening years of political and climatic stability.³³ Again the inference is that stoppages of water transport in the delta were the key factor. As an ocean port near major world shipping lanes, Shanghai could import at a practicable cost whatever goods normally obtained from the delta which temporary cir-

* Water as rainfall, or as irrigation, also keeps wheat yields higher in the delta than the north China average.

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cumstances interfering with inland transport made inaccessible locally.³⁴

Other food commodities have a relatively higher unit-value by weight, and are therefore able to move to the city over greater distances, in some cases independently of the water network. Fruit, largely citrus, comes in principally from Chekiang which is just south of the delta but in many areas cut off from water routes by high relief. For this comparatively long-distance overland shipping, the fruit is packed in pine boxes and wrapped in sacking as a protection against frost. In the rugged areas of Chekiang it is carried by porter, and is transferred to junk or sampan when it reaches the edge of the delta.³⁵ Other fruit sources for Shanghai are even more distant, but most of them can ship to the city over at least part of the route by sea. Grapes and melons come to Shanghai from Hopeh and Shansi, oranges and lichees from Kwangtung and Fukien, and apples from Liaoning (southern Manchuria).³⁶

Fresh meat is sold in the city only in limited quantities and is supplied (except for the tiny foreign consumption before 1941, which drew on refrigerated shipping from New Zealand and Australia) almost entirely from the immediate market-garden area. Fish and eggs are far more important elements in the average Shanghai diet than fresh meat, but some cured or salted meat is available from greater distances. Shanghai's main supply of cured hams comes from Chekiang, via Hangchow, and from Kiangsu and Anhwei by Yangtze steamer. Substantial amounts also come from as far as Szechuan and Yünnan, where the making of famous high-quality hams has long been a specialty. The tremendous cost of transporting hams from Yünnan does not apparently make their price prohibitive, although it does limit the market for them.³⁷ High unit-value is of course the basic factor.

Eggs have become industrial raw materials, in addition to their part in the city's diet, with the development of freezing and drying plants to prepare eggs for export. Fresh eggs are also exported from Shanghai in cold storage to places as distant as the United Kingdom. The Shanghai supply for this varied market is drawn from surprising distances. Within Kiangsu, eggs come to the city from all but two of the *hsien*.³⁸ These two are in the northernmost part of

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[135] China has significant deposits of tin and produced in the 1930's between 3 and 4 per cent of the world's tin ore. It is mined in the southwest tableland of Yunnan and Kwangsi, and in the hills which form the divide between the Hsi and Hsiang River basins (in Kwangsi and Hunan), but no tin was smelted anywhere in China until 1932, when a small plant was established at the largest Chinese mine in Yunnan. The ore, and the small amount of smelted tin were almost entirely exported. China before 1937 was the leading world producer of both tungsten and antimony, and Shanghai was able to fill its own small needs for these alloys entirely from domestic sources. Both ores were mined predominantly in the basins of the Hsiang and Yüan Rivers in Hunan, and over 90 per cent of the total production of both ores was exported, nearly all of it through Shanghai.

282 Hides for the leather industry in Shanghai, and for export, came
438 to the city, in order of importance, from Manchuria by sea, Tientsin (which acted as the main collecting center for hides from the grazing lands of northwest China) by sea, Shantung (Tsingtao and Tsinan) by both sea and rail, and from Hankow (collecting center for the hides of central China) and Szechuan via the Yangtze. Hides from Kiangsu and Chekiang were considered greatly inferior as well as being very limited in quantity in this animal-poor area of intensive hand agriculture, and accounted for less than 3 per cent of Shanghai's total supply.²⁹ Rubber was of course entirely imported.

[289] Shanghai's wood-working, furniture, and paper industries were
322 almost entirely dependent on imported wood from Canada, the United States, and Scandinavia. The delta area produces no wood at all, and the nearest commercially usable stands are in the hills along the Chientang River south and west of Hangchow, but they are small and of poor quality. About one-tenth of the quantity of foreign imports came in by junk from south China, particularly from Foochow, the lumber center of the China coast by virtue of the heavily wooded slopes of the Wu Yi and Ta Yü ranges, too steep for agriculture and not crossed by any important transport routes.³⁰

388 The two leading chemical industries, soap and matches, provide
438 in the sources of their raw materials an illustration of Shanghai's position as a manufacturing center in an otherwise pre-industrial economy. There were about fifty soap factories in Shanghai in the

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1930's, or about half of the large-scale mechanized soap factories in China. They drew 90 per cent of their raw materials from domestic sources. Lye (potash) was obtainable from plants in Shanghai. Vegetable tallow and vegetable oils (most importantly, cotton, peanut, rape seed, sesamum seed, and castor) came to the city via the Yangtze system from the major producing areas of central China.³¹ The fruit of the tallow tree is gathered in central China in October and the oil pressed out during the winter, but it is not marketed in Hankow and sent to Shanghai until the spring rise of the waterways leading to Hankow makes easy navigation possible. A dry spring makes the market soar in both Hankow and Shanghai.³²

The average Shanghai price before the war was nevertheless substantially below that of foreign vegetable oil imports (despite the production of coconut oil in southeast Asia). Vegetable wax from central China also largely replaced foreign imports of paraffin wax after 1930, when the *likin* (internal customs tax) was abolished by the Kuomintang government. The cheapness of domestic tallow, oils, and wax in Shanghai relative to seaborne foreign imports was clearly related to the use of inland water transport in bringing these products to the city. The fact that 80 per cent of Shanghai's soap production in the early 1930's was marketed outside Kiangsu also suggests that the city's water connections with its hinterland were basic in locating the industry there. Only 10 per cent of the Shanghai soap industry's raw materials were imported, largely coconut and olive oils for making especially high-quality soap for the domestic market.³³

By contrast, the Shanghai match industry was almost entirely dependent on overseas sources for its raw materials. It imported all of its sulphur (largely from Japan), all of its paper and cardboard (from Sweden), and all of its match-making machinery (from Japan). Most of its phosphorous was also imported, but some was produced locally from animal bones. Ample sulphuric acid was produced in Shanghai. For this product of such high unit-value by weight, raw materials to which so much value was added by manufacture could economically be imported, and the finished matches were marketed in every province of China.³⁴ Shanghai was never-

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316 Consular and Customs reports from Shanghai during the early decades of the modern city show that it depended almost entirely on overseas imports of coal. There was a large movement in ballast from England to Shanghai from the opening of the port to foreign trade in 1843 through the period of the 1860's, when foreign merchants had difficulty finding a market for foreign goods in return for China's tea and silk.⁴³ It was consumed largely by the coastal, river, and ocean vessels fueling at Shanghai.⁴⁴ This relatively cheap ballast coal from England was however gradually replaced after 1870 by even cheaper coal from Nagasaki in Japan and from the large Chinese government-operated Keelung mines (subsequently taken over by the Japanese in their conquest of Formosa in 1895) at the northern tip of Formosa, opened in 1875. Both of these new sources were on tidewater and coal from both could move to Shanghai as part of the growing volume of east Asian maritime trade.

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438 The first large-scale coal mine in China was opened at Kaiping, Hopeh, in 1878,* (map 9), and the first shipment from Kaiping to Shanghai arrived in 1881, but this coal was unable to compete with Japanese imports at Shanghai until after the turn of the century. By 1930, the Kaiping mine accounted for 23 per cent of China's annual coal production.⁴⁵ Kaiping was connected by rail to Tangku and Tientsin in 1888 (the first permanent railway in China), and to Shanhaikuan, via Chingwantao, in 1894. At Chingwantao, 79 miles by rail north of Kaiping, a seawall and wharves were built between 1899 and 1902 to permit shipment of Kaiping coal from this port, where there was no bar as at Tangku.⁴⁶

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439 This facilitation of transport, and the relatively short rail-haul from the mines to Chingwantao, were undoubtedly factors in the increased ability of Kaiping coal to compete in the Shanghai market after 1902. In the 1890's, with the assistance of French capital, another new supply of coal appeared on the east Asia market, from Indo-China. The mines, located on tidewater near Haiphong (map

* This was the Kaiping Mining Bureau, organized at the instigation of Li Hung-chang in 1878, and later (1912), after a period of British control (1901-1912), reorganized as the Kailan Mining Administration, a joint Sino-British undertaking and one of the pioneer modern industrial enterprises in China. For a valuable account of its development, see Ellsworth Carlson, *The Kailan Mines* (1949).

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9), could compete in Shanghai with Japanese, Formosan, or north China coal.

The table below estimates the relative rank of major sources for Shanghai's coal in the 1930's, by percentages of total tonnage of coal delivered in Shanghai in each year from all the sources listed.⁴⁷

Source	1931	1932	1933	1934	1935	1936	Average 1931-36
Kaiping (Hopeh)	37	46	37	36	37	36	37.5
Tzuchuan-Poshan (Shantung)	7	6	11	17	19	22	14.0
Japan (ex-Nagasaki)	18	16	15	8	5	3	10.8
Fushun (Manchuria)	19	13	13	6	3	1	9.5
Anhui (mines on Yangtze)	—	—	9	10	14	23	9.2
Chunghsing (Shantung)	8	8	6	12	12	8	9.1
Haiphong (Indo-China)	4	6	6	5	5	5	5.3
Shansi (mine(s) unspecified)	7	5	3	6	5	2	4.6
	100	100	100	100	100	100	100.0

Mainland places mentioned in the foregoing table will be found in map 9. The Poshan and Tzuchuan mines were located in the major coal field of Shantung. Both mines began to produce coal on a large scale in the late 1920's, after they were connected by rail to Tsingtao, approximately 175 miles away. Tzuchuan and Poshan coal moved to Shanghai largely by rail to Tsingtao and thence by sea, although there was some rail shipment via Nanking and thence to Shanghai via the Yangtze. Fushun was linked by rail with the port of Yingkow (Newchwang), 120 miles to the south at the mouth of the Liao River, as well as by limited water transport on the river, and by rail with Dairen, Manchuria's leading port, 210 miles to the south. The mines in Anhwei were located along the Yangtze, but production was not begun on a large scale until after 1932. The Anhwei coal deposits are relatively small and their exploitation is more expensive than in the larger Chinese mines, such as at Kaiping. Only their location along the Yangtze made their exploitation profitable as a source for Shanghai's coal supply. Coal from Chunghsing in Shantung moved 120 miles by rail to Haichow, and thence to Shanghai by sea. Shansi coal entering Shanghai came principally from the mines at Tzu-

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- 438 chou, and moved to both Tientsin and Haichow by rail, whence it
316 traveled to Shanghai by sea.

The figures for coal imports from Japan and Manchuria in 1931, 439 1932, and 1933 listed in the foregoing table owe their size primarily 438 to Japanese dumping of coal on the Shanghai market in these years at a price which was often less than two-thirds of the domestic price of coal in Japan. The table shows that while this dumping did not greatly affect sales of Kaiping coal in Shanghai, it did cut into the Shanghai market for Shantung coal in particular (Tzu-chuan, Poshan, and Chunghsing). This may suggest, in the absence of complete available price figures, that Kaiping coal was relatively cheap in Shanghai and that Shantung coal was relatively expensive. A reason for this difference may be found in the long rail-haul necessary for coal moving from Shantung mines to Shanghai (120 miles from Chunghsing and 175 miles from Tzuchuan-Poshan), compared with the shorter rail haul of 79 miles for Kaiping coal to Chingwantao.

[497] Railway figures show that coal shipments arriving in Shanghai by rail in the years 1931, 1932, and 1933 averaged less than one-quarter of the railway coal shipments recorded for 1930, 1934, 1935, and 1936.⁴⁸ Apparently direct rail haulage of coal from Shantung (or from other sources) to Shanghai was not profitable in the face of Japanese dumping in Shanghai. Figures of the Maritime Customs for these years show no significant falling off in seaborne cargoes of coal arriving in Shanghai between 1931 and 1933, and in fact record a slightly higher average for these three years than for the years immediately preceding and following them, readily explainable in terms of larger imports of the unnaturally cheap Japanese coal for inland distribution as well as for consumption in Shanghai. In any case, Kaiping coal apparently had no difficulty in maintaining its position on the Shanghai market despite Japanese dumping.

438 Shanghai drew most of its coal from sources closely oriented to
316 water transport. Coal deposits are widely distributed over large areas of north and central China. While Shanghai received its largest supply from Kaiping mines near the coast, and a relatively constant supply from the mines on tidewater at Haiphong, it drew

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inland coal only from Fushun (on a navigable tributary of the Liao, and normally the cheapest pit-head coal in East Asia due to easy extraction from huge open-pit mines), Anhwei (deposits along the Yangtze), Shansi (China's major coal reserve), and Shantung (the nearest large coal deposits to Shanghai). The Chinghsing mines in Hopeh could not depend for transport on their largely unnavigable river connections with Tientsin, 190 miles away by rail.

The accompanying table lists the average annual production (in millions of tons) of the major coal-producing provinces of China in the early 1930's.⁴⁰

<i>Province</i>	<i>Production</i>
Hopeh	7.7
Shantung	3.5
Shansi	2.7
Honan	2.1
Szechuan	.9
Hunan	.6
Anhwei	.6

Hopeh, with its Kaiping mines 79 miles by rail from the port of Chingwantao, supplied the largest share of Shanghai's coal for the period 1931-1936 (37.6 per cent). Shantung, immediately north of Kiangsu and the nearest large coal producer to Shanghai, but with limited water transport, supplied an average of only 23.1 per cent of Shanghai's coal during the same period. Inland Honan, Szechuan, and Hunan do not figure as sources of Shanghai coal. Anhwei, also without a seacoast, but with mines along the Yangtze, accounted for 23 per cent of Shanghai's coal supply by 1936. Landlocked Shansi, China's third producer of coal accounted for less than five per cent of Shanghai's coal supply for the same period. Overseas coal imports (Japan, Manchuria, and Indo-China) accounted for 25.6 per cent of Shanghai's coal supply for the period 1931-1936, or more than any Chinese province except Hopeh (see table above on p. 185).

Ting estimates that for China as a whole in the period of the 1930's domestic coal was moved 70 per cent (by weight) by rail, and

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438 30 per cent by water.⁵⁰ Shanghai was thus in a relatively favorable
 489 position in being able to draw its coal supplies so largely over water routes. For the period 1930 to 1936, the city imported an annual average of 3.9 million tons of coal from all sources combined.⁵¹ Figures of the Maritime Customs at Shanghai for the same period show an annual average of 3.5 million tons of coal arriving in the city by sea and river⁵² (so that railway haulage accounted for less than 10 per cent). Even so, the distances separating Shanghai from its sources of coal made domestic coal more expensive there than for instance in Tientsin, where the cost of Kaiping coal was about 10 per cent less than in Shanghai. Shansi coal, selling for CNC\$5 per ton at the pit-head, sold after its long rail haul for CNC\$10 at Taku and CNC\$12 per ton at Shanghai.⁵³ (Note that the price doubled between the mines and Taku, but increased by only 20 per cent between Taku and Shanghai, more than twice as long a haul, but by sea rather than by rail.) Shanghai has the advantage of central location, and can draw with equal ease on domestic or overseas coal as prices vary.

375 Consumption of coal in the city, according to C. A. Bacon, was divided approximately as shown below.⁵⁴

<i>Users</i>	<i>Approx. Annual Consumption, in Tons</i>	
Public Utilities	1,475,000	
electric power companies		1,300,000
gas works		100,000
waterworks		75,000
Other Industries	1,100,000	
Households	500,000	
Shipping	400,000	
Railways	350,000	
Miscellaneous	50,000	
TOTAL	3,875,000	

365 According to these figures, 37 per cent of Shanghai's coal consumption was accounted for by the electric power companies. There were four of these companies in the 1930's, of which the Shanghai Power Company (sold by the Shanghai Municipal Council to an American company in 1929, and in 1949-50 taken over by the Com-

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A period of reconstruction ensued until the end of 1940. Much of the money of the nearby provinces had found its way into Shanghai banks during the early days of the hostilities. This money early sought employment. There was a building boom in the western district of the Settlement proper which had been free from fighting and which was one of the few areas on the China coast where Chinese industrial enterprises could develop without Japanese control. In 1938 the Government of China retired successively to Hankow and later to Chungking. Many Shanghai Chinese factory owners, while rebuilding in Shanghai, were prepared also to play their part in the industrialisation of interior China which was to be so significant in the succeeding years. Their plants in Shanghai were equally important for the war effort of Free China, however, in the years that intervened between 1938 and the outbreak of Pacific hostilities in 1941. While Hongkong remained open as a port and until through Japanese instigation the Chinese Customs in Shanghai in the autumn of 1941 prevented the export from Shanghai of certain commodities including cotton goods, very heavy shipments month by month left for the south for transport into interior China. Much cargo found its way out of Shanghai by canals and even by human transport, finally penetrating the Japanese lines and reaching the western provinces. The importance of Shanghai as a supply base during almost four years of war can be recognized when the commodity situation in free China in 1942 and later is considered. There were never sufficient consumer goods in the interior even when the trade channels from the coast were open; but the worsening of the situation and the consequent extreme rise in price levels date from the loss of Shanghai products.

In the western district Extra-Settlement area, in the enclaves between Settlement-policed roads, hundreds of new industrial structures began to rise on former vegetable gardens drained by tidal creeks. Over their construction the Shanghai Municipal Council could exercise no authority. These workshops and factories lacked elementary sanitary provisions, and, because the flimsy buildings were of inflammable material, fires were frequent. But as soon as fire had destroyed a building, the indomitable Chinese small industrialist began its reconstruction. Within the limits of the Settlement proper, the reconstruction period was used as far as possible by Public Works and Health Departments, as well as Fire Brigade

CHAPTER VIII

FOOD AND NUTRITION

AT A TIME WHEN Shanghai is militarily occupied following the outbreak of Pacific hostilities, and its food supplies subject to willingness of the Japanese military to provide them, one is apt to think of the problem of food entirely in terms of whether or not there will be any at all. From the moment of the commencement of hostilities in August 1937, the question of food supply held the concern of the Settlement authorities. Two days after the first shot was fired in the Shanghai area, the Supplies Committee of the Shanghai Municipal Council met and through the intervening years dealt with the problem actively and continuously. 262 722

The problem at first was what the city would do when it was cut off from its hinterland, the rice-producing area; when fighting moved back into the provinces and destroyed the autumn rice crop; when rice boats would no longer bring rice to the city. In 1932, when there had been five weeks of fighting in the Shanghai area, rice boats had feared to come into the city, and trucks had been sent out to meet them beyond the fighting zone, to bring in needed food. Rice, which then usually sold at \$10 to \$12 per *shih* (172 pounds), rose to the high price of \$17 to \$18 because of fear of shortage, and fell with what at that time seemed a dramatic drop when the supplies were brought in and the feared shortage did not eventuate. Those who had planned the small adjustment needed in 1932 found that more drastic measures were necessary in 1937 and later. 262 438 727 [435]

The provinces nearest to Shanghai are rich rice-producing areas. Through part of Kiangsu province winds Soochow Creek, and from Chekiang province into Kiangsu flows the Whangpoo River, to meet in Shanghai. Down both of these waterways in normal times came a succession of large rice boats, and from Wuhu above Nanking on the Yangtse River larger steamers laden with grain. In general it was a simple trade. Rice was sent on consignment to rice merchants in Shanghai, and payment was later made to the interior

438 chiefly in the form of the city's cotton textiles, soap, cigarettes,
 262 matches, and rubber shoes. In addition, through importing firms,
 722 a certain amount of foreign rice arrived, usually from Indo-China;
 but Saigon rice was considered inferior, and Chinese rice was preferred when it was available.

It was obvious that when the city was surrounded by Japanese troops, its waterways could no longer be used for the transportation of rice. Immediately after the outbreak of hostilities the Shanghai Municipal Council placed orders in Saigon for 7,000 tons of rice, and chartered ships to bring it to the city. But because fighting was taking place across the Whangpoo River, the ships would not enter it, and it was necessary to send steel lighters by tug out into the Yangtse mouth to off-load the rice. This rice, stored in godowns all over the area south of Soochow Creek, was available when in November 1937, the expected severance of supplies from the interior occurred.

It was then hoped, as time went on and hostilities were removed further from the neighbouring provinces, that normal trade relations with the hinterland might be restored. For a time rice did come into the city in fair quantities. But increasing controls exercised by the Japanese military, who gave Japanese firms the privilege of collecting rice with reservation for military use, and increasing difficulties of obtaining rice in the growing districts due to various factors, by 1940 compelled Shanghai to rely almost entirely on rice imported from Saigon. The steep rise in cost of living in Shanghai dates from the commencement of dependence on foreign sources. It was tragic that Shanghai should be tied to foreign exchange in order to feed its population at a time when the exchange value of the Chinese national currency was falling.

Other factors soon intruded. Freight rates and insurance charges rose month by month following the outbreak of the European war and added their share to the increasing cost of imported rice. But the situation was to become even worse. During the autumn of 1940 Japan was engaged in gaining control of northern Indo-China, with the result that after early February 1941, no orders for rice would be accepted in Saigon until the Japanese demand for 700,000 tons had been met.

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 262 WHERE, THEN, WAS Shanghai to get rice? Renewed efforts to obtain
 438 rice from Chinese provinces near Shanghai failed. Prior to the sign-

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ing of the treaty with Nanking on November 30, 1940, it was announced that high Japanese military authorities in Nanking had agreed that, subject to meeting the needs of the army and with certain other reservations, rice collection should be a function of the Chinese authorities. Actually little Chinese rice was made available to Shanghai. 262 438 722

There were ample stocks of rice in Burma, but there were no ships to bring it to Shanghai. This was well known, not only to rice dealers in Shanghai, but to the general public. Therefore, despite the presence of a large reserve supply in the warehouses of the city, the retail price of rice rose at an accelerating rate until in May 1941, as a result of private profiteering and public fear, it reached the till then unprecedented height of \$145 per *shih*. 435 262

It can readily be understood that with such difficulties in feeding the Settlement, major emphasis had to be placed on ensuring supplies. Even though high prices were undesirable, it was important that there should be supply at any price. Rice riots have occurred more than once since 1937. 262 579

The distressing effects of high prices were illustrated by the practice of "rice sweeping" (and, indeed, the snatching of other commodities such as raw cotton) which became a frequent sight in the city as a consequence of the rising prices. When a truckload of rice halted at a traffic intersection, a dozen waifs, adult and adolescent, appeared from nowhere, moving like lightning. In a twinkling one or more rice bags were pierced with knives, and as the precious grain began to run out, it was scooped swiftly with the dust of the roadway into a receptacle. The "sweeper" would often disappear before any police could act. But if caught, he or she appeared next morning in the First Special District Court, that busy court which dealt with an average of 10,000 cases each month. Detention followed; but the need that prompted the snatching remain unfilled. 685 262 435

ALTHOUGH IN THE CRISIS of 1937 the Shanghai Municipal Council had intervened to bring rice to Shanghai, it had no desire to interfere with the normal trade in rice unless forced by circumstances to do so. When faced with the crisis in March 1941, therefore, the Council decided that it would charter ships, possibly with the assistance of the British Admiralty. Space could then be sold to rice importers. At the end of March the Council announced this intention and appointed a special committee of businessmen under 633 438 262

633 the chairmanship of one of its own members to deal with the matter.

438 But it proved impossible to secure the desired ships, and the out-
262 look for Shanghai appeared dark. The authorities were therefore much relieved when in April the Government of Hongkong requested the Shanghai Municipal Council to act as its agent in disposing of stocks of Rangoon rice which had been held in Hongkong as a reserve but could not be kept indefinitely without deteriorating. An arrangement was concluded whereby the Council agreed to receive enough for the Settlement's needs at a price which would enable the Hongkong Government to replenish its stocks through imports from Rangoon.

262 On April 26, 1941, when second-grade Saigon rice was quoted at \$126 per *shih* in the Shanghai rice shops, the Council announced its intention to import Burmese rice from Hongkong. Speculators 438 who had been hoarding rice made last-minute efforts to sell at high 633 levels. Prices rose steadily until May 3, when \$145 was quoted for second-grade Saigon rice, but during the next fortnight they dropped, until May 17, when Council rice at \$110 per *shih* was placed on sale in the retail shops. The "racket" for the moment was broken.

435 Ever since 1937, the Council's Supplies Committee had wrestled 633 with the question of price control. The rice trade appointed a 262 "Shanghai Rice Price-Fixing Committee" whose decisions could, according to Chinese Law, be enforced in the First Special District Court. During 1939 it fixed a price endorsed by the Council, of \$40 per *shih*, which, however, was soon exceeded; and a "black market" developed where deals were consummated at prices considerably beyond this price. During 1940 the question of price-fixing generally was again exhaustively examined by a special sub-committee of the Supplies Committee. One result of its work was the adoption by the Council of measures requiring clear marking of the prices of daily necessities sold in the Settlement. The aim of this was to induce competitive selling on the part of vendors, and to permit the buying public to discover where goods were most reasonably priced. The Council, together with the French Concession administration, published regular price lists of necessities, also with the idea of informing the public where goods could be most reasonably purchased. In June 1940 the Council established